

INTERNATIONAL COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference GR61-014		Date of mailing (day/month/year) 23 JUN 2004
		FOR FURTHER ACTION See paragraph 2 below
International application No. PCT/US04/12849	International filing date (day/month/year) 26 April 2004 (26.04.2004)	Priority date (day/month/year) 25 April 2003 (25.04.2003)
International Patent Classification (IPC) or both national classification and IPC IPC(7): H 01 J 49/00 and US Cl.: 250/282, 281, 288, 286		
Applicant GRIFFIN ANALYTICAL TECHNOLOGIES, INC.		

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/US04/12849

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>2, 12, 17, 18, 23-26</u>	YES
	Claims <u>1,3-11,13-16,19-22, and 27-51</u>	NO
Inventive step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-51</u>	NO
Industrial applicability (IA)	Claims <u>1-51</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1,3-11,13-16,19-22, and 27-51 lack novelty under PCT Article 33(2) as being anticipated by US Pat No 6,541,765 issued to Vestal.

Vestal discloses an ionization source configured to apply different ionization energies to a sample to provide different sample characteristics (see for example col.5, lines 45-54; col.6, lines 41-59).

Vestal discloses a processing circuitry configured to process the different sample characteristics to identify the sample (see for example col. 12, lines 24-26).

As per claim 3, Vestal discloses the sample characteristic is mass spectra (col. 1, lines 19-26).

As per claims 4-6, 8-11,15, 19-21 and 27-51, Vestal discloses two data sets (see col.11, lines 13-34), parameter modifications (col.8, lines 40-45), and mass spectra differences (see for example col.24, lines 23-48).

As per claims 7,13-14, and 16, Vestal discloses a mass spectrometer having a ionization component configured to receive a sample and provide a first ionization energy to the sample to form a first and a second ionized analyte and a processing circuit (see for example col.6, lines 41-59).

As per claim 22, Vestal discloses an ionization source configured to apply different ionization energies to a sample to provide different sample characteristics (see for example col.5, lines 45-54; col.6, lines 41-59). Vestal discloses also two data sets (see col.11, lines 13-34), parameter modifications (col.8, lines 40-45), and mass spectra differences (see for example col.24, lines 23-48). Vestal further discloses a mass spectrometer having a ionization component configured to receive a sample and provide a first ionization energy to the sample to form a first and a second ionized analyte and a processing circuit (see for example col.6, lines 41-59).

Claims 2,12,17-18, and 23-26 lack an inventive step under PCT Article 33(3) as being obvious over Vestal '765 in view of US Pat No 6,717,130 issued to Bateman et al.

Vestal discloses the claimed invention except for an electron impact source.

However, Bateman et al teach the art-recognized equivalence of an electron impact source and laser-assisted ionization (see col.6, lines 25-36).

It would have been obvious to an ordinary artisan to substitute an electron impact source for a photo ionization source because the selection of art-recognized equivalent sources falls within the level of routine skill in the art.

As claims 25-26, Bateman et al also teach the inclusion of an ion trap (see col.6, lines 52-58).

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US04/12849

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments: